Average Rate of Change … Practice Set 2

Lesson 1-4 Average Rate of Change 3

Learning Goals:

- *I can define and calculate the average rate of change of a function and explain the connection between average rate of change and slope.*

1. Use the table below to answer the questions.

S	H	I	R	E	Y
-3	0	3	4.5	6	8.2
5	-1.7	-4	-2	0	9.5

a. Find the average rate of change between the points S and Y. Explain what this tells you about the graph between those two points.

$\frac{\Delta y}{\Delta x} = \frac{9.5-5}{8.2-3} = \frac{4.5}{5.2} = \boxed{0.865}$ Slight overall increase between those points.

b. Looking at the other points in the table, what is misleading about the rate of change you just calculated?

Looking at all other numbers, it seems like the graph would decrease from the start.

c. What could you do to get a more accurate description of the graph?

Find the AROC between closer & more points.

2. Use the equation below to answer the questions.

$$y = 7 - \frac{3}{2}x$$

a. Find the missing entries in the table below.

x	-5	-2	0	1.3	7.9
y	14.5	10	7	5.05	-4.85

$y = 7 - \frac{3}{2}(1.3) = 5.05$

b. Find the average rate of change between any **two** pairs of points.

$\frac{-2-5}{10-14.5} = \frac{3}{-4.5} = \boxed{-0.\overline{6}}$ $\frac{1.3-0}{5.05-7} = \frac{1.3}{-1.95} = \boxed{-0.\overline{6}}$

c. Explain why your answer to Part b makes sense.

The "y=" equation is linear. It has a constant rate of change - it's always the same.

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